



BMW OPERATES

WORLD'S FIRST OF ITS KIND

BMW became the world's first automotive manufacturer to use recycled methane gas to provide energy to its paint shop.

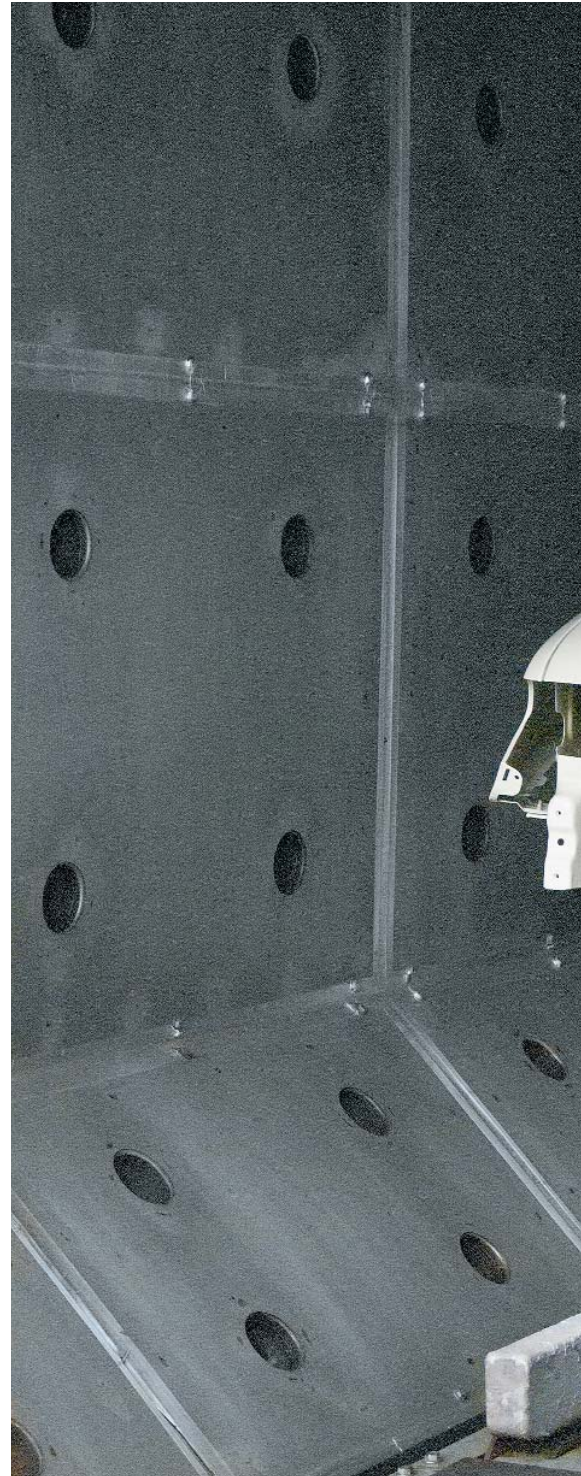
by Briggs Hamilton and Dara Leadford

Spartanburg, South Carolina-based BMW Manufacturing Co. gained international recognition in June 2002, when the automotive manufacturer first announced it would use recycled landfill methane gas as an energy source in its automotive manufacturing facility. In order to do so, the company had to construct an unprecedented 9.5-mile pipeline from the landfill to its facility. The system went online in February 2003. By using the previously unused energy from landfill gas, BMW Manufacturing was able to reduce area emissions of carbon dioxide, a greenhouse gas, by approximately 60,000 tons and recover enough energy to heat 10,000 homes per year.

Landfills are the largest human-made methane source in the United States. Methane is produced as waste decomposes. When released into the air, it is a greenhouse gas and contributes to local air pollution.

World's First Landfill Gas-Operated Automotive Paint Shop

Less than four years after BMW Manufacturing set the standard as an environmentally friendly automotive manufacturer, the company moved the bar even higher by announcing in May 2006 that it would become the world's first automotive manufacturer to use recycled methane gas to provide energy to its paint shop. The system went online in August 2006. Currently, almost half of BMW Manufacturing's energy is now provided by this renewable resource, saving the company at least \$1 million per year in energy costs. The additional use of methane gas reduced greenhouse gases the



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GREEN PAINT SHOP



Photos courtesy BMW

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“Three of our core principles are innovation, protecting the environment, and being a good corporate citizen,” said Briggs Hamilton, BMW Manufacturing’s environmental section manager. “This is such a positive for everyone involved. There literally hasn’t been a downside to this project. This project allows us to take a previously wasted energy source and use it to generate electricity and heat for our plant. This results in lower emissions, which helps to protect the environment and the community.”

“The paint department is the largest consumer of energy in any automotive manufac-

turing plant,” said Dara Leadford, the engineering section manager who managed the paint shop conversion. “Fifty percent of our energy is used in the paint department for controlling the environment—a necessity for a quality surface finish.

“The unique thing about this project is that we are using fuel in a way it has never been used before—production-critical automotive ovens that cure the paint on our vehicles. ‘Production-critical’ means equipment that is essential to BMW’s production process; without it, production would shut down.”

Future

With an investment of \$2.5 million and the current high costs of energy, the company

expects to see a return on its investment in less than two years. It also hopes other BMW manufacturing facilities will follow its lead.

“This helps BMW control its energy costs and remain a strong competitor in the global marketplace,” Leadford said. “Environmentally, we will reduce our carbon dioxide emissions and detrimental effects on global warming.”

“We have received a tremendous amount of interest in how we made this project a reality,” Hamilton said. “We’re eager to share the knowledge we’ve gained—we’re not in competition with anyone on improving the environment.”

BMW's Partners

BMW worked with longstanding partner Durr Systems of Plymouth, Michigan, to modify and upgrade equipment so landfill gas could be used to fuel the paint shop. Durr Systems specializes in developing and implementing energy-performance projects in industrial facilities and is a partner in the Environmental Protection Agency (EPA) Landfill Methane Outreach Program, which helps businesses lower operating costs, protect the environment, and build a sustainable future.

“BMW is the first automotive paint shop to integrate the use of landfill gas in its process equipment,” said Dave Ciuffoletti, Durr’s vice president of sales. “BMW should be congratulated for its environmental stewardship. By taking advantage of a renewable resource, it has truly become the world’s first green paint shop.”

Two other important partners in this multi-million dollar project were Ameresco Energy Services and Waste Management Inc. Ameresco designed, built, and owns the pipeline, gas processing, and gas compression facilities and manages the overall operations of the project. Waste Management, which owns and operates the Palmetto Landfill, supplies landfill gas to 69 gas-to-energy projects in 21 states.

BMW is a charter member of the EPA’s National Environmental Performance Track, which recognizes companies for their environmental stewardship and performance. The company is also a member of the South Carolina Environmental Excellence Program. The company is on the Dow Jones Sustainability Group Index, which rates environmentally friendly companies.

About the Company

BMW Manufacturing Co. is a subsidiary of BMW Group in Munich (www.bmwusfactory.com). In addition to the South Carolina manufacturing facility, BMW’s North American subsidiaries include sales, marketing, and financial services operations in the U.S., Canada, and throughout Latin America; a South Carolina information technology consulting and systems integration firm; and a California design firm. ■

Briggs Hamilton is BMW Manufacturing’s environmental manager. Dara Leadford is the former final paint section manager and current Six Sigma Black Belt for BMW Manufacturing Co.

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